

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Currently Amended) A magnesium compound ~~substantially comprising~~ consisting essentially of a magnesium dialkoxide, prepared by reacting metallic magnesium, an alcohol and ~~at least 0.0001~~ to 0.06 gram atom, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, at 30° to 60° C.

Claim 2. (Original) The magnesium compound as claimed in Claim 1, wherein the halogen is iodine.

Claim 3. (Original) The magnesium compound as claimed in Claim 1, wherein the halogen-containing compound is magnesium chloride.

Claim 4. (Currently Amended) A solid magnesium compound ~~substantially comprising~~ consisting essentially of a magnesium dialkoxide, whose particle size distribution index (P), as defined in formula (I-1), is smaller than 4.0, $P < 4.0$:

$$P = (D_{90}/D_{10}) \quad (I-1)$$

wherein D_{90} indicates the particle diameter of the compound particles corresponding to the cumulative weight fraction of 90 % in the particle size distribution thereof computed from light transmittance through a suspension of the compound particles in a hydrocarbon; and D_{10} indicates the particle diameter of the compound particles corresponding to the cumulative weight fraction of 10 % therein.

Claim 5. (Withdrawn) An olefin polymerization catalyst comprising (A) a solid catalyst component prepared by contacting (a) the magnesium compound of any of Claims 1 to 4 with (b) a titanium compound of the following general formula (I-3), and (B) an organometallic compound:



(wherein x indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer of from 0 to 4.)

Claim 6. (Withdrawn) An olefin polymerization catalyst comprising (A) a solid catalyst component prepared by contacting (a) the magnesium compound of any of Claims 1 to 4, (b) a titanium compound of the following general formula (I-3), and (c) an electron donor compound with each other, (B) an organometallic compound, and (C) a third component of an electron donor compound:



(wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer of from 0 to 4.)

Claim 7. (Withdrawn) A method for producing olefin polymers, which comprises polymerizing an olefin in the presence of the olefin polymerization catalyst of Claim 5 or 6.

Claim 8. (Currently Amended) A magnesium compound ~~substantially comprising~~ consisting essentially of a magnesium dialkoxide prepared by reacting metallic magnesium, an alcohol and at least 0.0005 to 0.06 gram atoms, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, in the presence of a saturated hydrocarbon compound.

Claim 9. (Original) The magnesium compound as claimed in Claim 8, wherein the halogen is iodine.

Claim 10. (Original) The magnesium compound as claimed in Claim 8, wherein the halogen-containing compound is magnesium chloride.

Claim 11. (Currently Amended) A solid magnesium alkoxide compound ~~substantially comprising~~ consisting essentially of a magnesium dialkoxide, whose particle size distribution index (P), as defined in formula (I-1), is smaller than 4.0, $P < 4.0$:

$$P = (D_{90}/D_{10}) \quad (I-1)$$

wherein D_{90} indicates the particle diameter of the compound particles corresponding to the cumulative weight fraction of 90 % in the particle size distribution thereof computed from light transmittance through a suspension of the compound particles in a hydrocarbon; and D_{10} indicates the particle diameter of the compound particles corresponding to the cumulative weight fraction of 10 % therein, and whose particles have a sphericity (S), as defined in formula (I-2), of smaller than 2.0, $S < 2.0$:

$$S = (L_1/L_2)^3$$

wherein L_1 indicates the major diameter of the magnesium compound particle prepared by imaging the compound through scanning electronic microscopy followed by analyzing the projected image of the particle, and L_2 indicates the diameter of the circle having the same area as the projected area of the magnesium compound particle.

Claim 12. (Withdrawn) An olefin polymerization catalyst comprising (A) a solid catalyst component prepared by contacting (a) the magnesium compound of any of Claims 8 to 11 with (b) a titanium compound of the following general formula (II-3), and (B) an organometallic compound:



(wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer of from 0 to 4.)

Claim 13. (Withdrawn) An olefin polymerization catalyst comprising (A) a solid catalyst component prepared by contacting (a) the magnesium compound of any of Claims 8 to 11, (b) a titanium compound of the following general formula (II-3) and (c) an electron donor compound with each other, (B) an organometallic compound, and (C) a third component of an electron donor compound:



(wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer of from 0 to 4.)

Claim 14. (Withdrawn) A method for producing olefin polymers, which comprises polymerizing an olefin in the presence of the olefin polymerization catalyst of Claim 12 or 13.

Claim 15. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 1 with (b) a titanium compound of formula (I-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer of from 0 to 4.

Claim 16. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 1, (b) a titanium compound of the following general formula (I-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4, and (c) an electron donor with each other.

Claim 17. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 4 with (b) a titanium compound of formula (I-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4.

Claim 18. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 4, (b) a titanium compound of formula (I-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4, and (c) an electron donor with each other.

Claim 19. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 8 with (b) a titanium compound of formula (II-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4.

Claim 20. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 8, (b) a titanium compound of formula (II-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4, and (c) an electron donor with each other.

Claim 21. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 11 with (b) a titanium compound of formula (II-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4.

Claim 22. (Withdrawn) A solid catalyst component prepared by contacting (a) the magnesium compound of Claim 11, (b) a titanium compound of formula (II-3):



wherein X indicates a halogen atom; R indicates a hydrocarbon group having from 1 to 10 carbon atoms, and R's may be the same or different; and n indicates an integer ranging from 0 to 4, and (c) an electron donor with each other.

Claim 23. (Previously Presented) The magnesium compound as claimed in Claim 1, wherein the alcohol is ethanol.

Claim 24. (Previously Presented) The magnesium compound as claimed in Claim 8, wherein the alcohol is ethanol.

Claim 25. (Currently Amended) A magnesium compound ~~substantially comprised~~ consisting essentially of magnesium dialkoxide prepared by reacting a combination of reactants consisting essentially of metallic magnesium, a hydrocarbyl alcohol and ~~at least~~

0.0001 to 0.06 gram atoms, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, at 30° to 60° C.

Claim 26. (Currently Amended) A magnesium compound ~~substantially comprised~~ consisting essentially of magnesium dialkoxide prepared by reacting a combination of reactants consisting essentially of metallic magnesium, a C₁₋₆-aliphatic alcohol and ~~at least~~ 0.0001 to 0.06 gram atoms, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, at 30° to 60° C.

Claim 27. (Canceled)

Claim 28. (Previously Presented) The magnesium compound as claimed in Claim 1, wherein the amount of alcohol ranges from 5 to 50 mols relative to one mole of magnesium.

Claim 29. (Currently Amended) A magnesium compound ~~substantially comprised~~ consisting essentially of magnesium dialkoxide prepared by reacting metallic magnesium, a C₁₋₆-aliphatic alcohol and at least 0.0005 to 0.06 gram atoms, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, in the presence of a saturated hydrocarbon compound.

Claim 30. (Previously Presented) The magnesium compound as claimed in Claim 1, which is prepared by reacting metallic magnesium, an alcohol and 0.0001 to 0.06 gram atom, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound.

Claim 31. (Previously Presented) The magnesium compound as claimed in Claim 1, wherein the ratio of halogen or a halogen compound to magnesium, on a gram atom basis, is 0.019 or less.

Claim 32. (Previously Presented) The magnesium compound as claimed in Claim 4, wherein the mean particle size ranges from 38 to 60 μm .

Claim 33. (Previously Presented) The magnesium compound as claimed in Claim 8, which is prepared by reacting metallic magnesium, an alcohol and 0.0005 to 0.06 gram atom, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound.

Claim 34. (Previously Presented) The magnesium compound as claimed in Claim 8, wherein the ratio of halogen or a halogen compound to magnesium, on a gram atom basis, is 0.019 or less.

Claim 35. (Previously Presented) The magnesium compound as claimed in Claim 11, wherein the mean particle size ranges from 38 to 60 μm .

Claim 36. (Previously Presented) A magnesium alkoxide compound prepared by reacting metallic magnesium, an alcohol and 0.0001 to 0.06 gram atom, in terms of halogen atoms relative to one gram atom of magnesium, of a halogen and/or a halogen-containing metal compound, at 30° to 60° C, the particulate magnesium ~~alkoxide~~ dialkoxide compound obtained having a mean particle size ranging from 38 to 60 μm , a degree of sphericity S of less than 2 and a particle size distribution index (P) of less than 4.0.